

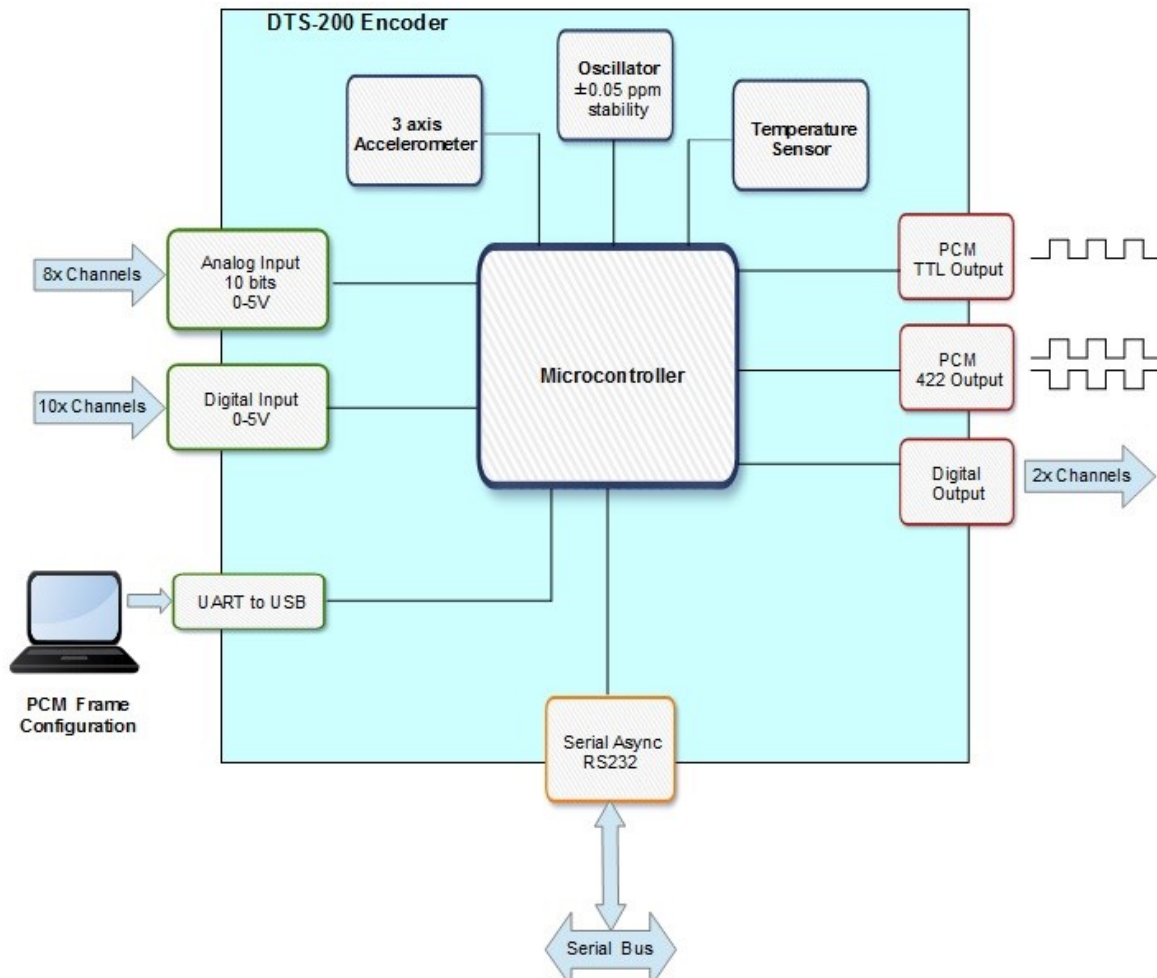
DTS-200 PCM Encoder is a low cost miniature programmable data acquisition system suited for rockets, unmanned aerial vehicle (UAV) and flight test missions. The encoder transmits data in a IRIG-106 Chapter 4, fixed bit rate PCM stream.

DTS-200 provides accurate radial distance between payload and telemetry antenna when used with Slant Range units (DTS-100 family). When used with the Mobile Telemetry Tracking System, it performs a low cost solution to determine the location and trajectory of a target in real time, in replacement of expensive onboard GPS or radar tracking.

Easy configuration setup is accomplished via a telemetry user application with an intuitive graphical user interface (GUI), that is additionally coupled with ground processing capabilities. A unique set of programmable PCM Frame and parameters is applied to both, decoder and encoder units, simplifying test engineering work.

### Key Features

- IRIG 106 Class I Compliance
- High speed operation up to 1 Mbps
- $\pm 0.05$  ppm bit rate stability
- Asynchronous Serial Interface
- Rugged Construction
- Digital non isolated Inputs
- Analogue non isolated Inputs
- 3 Axis Accelerometer
- Temperature Sensor



**PCM Encoder**

Standard	IRIG 106 Class I
Output Data Rates	10 bps to 1 Mbps $\pm 0.05$ ppm
Output Format	NRZ-L
Data Polarity	Normal or Inverted
Data Alignment	MSB first or LSB first
Output Levels	TTL and RS-422
Major Frame Length	1 to 1024 Minor Frames per Major Frame
Minor Frame Length	up to 1.024 bits per Minor Frame
Word Length	6 to 16 bits
Frame Sync Pattern	Up to 33 bits
Sub-Frame Sync	SFID

**3 AXIS ACCELEROMETER**

Range	$\pm 2$ g, $\pm 4$ g, $\pm 8$ g, $\pm 16$ g
Resolution	4 mg/LSB

**TEMPERATURE SENSOR**

Range	-40°C to +150°C
Resolution	16-bit resolution: 0.0078°C
Accuracy	$\pm 0.20$ °C from -10°C to +85°C

**POWER SUPPLY**

Input Voltage Range	10 VDC to 42 VDC
Overv & Reverse Voltage	$\pm 45$ V

**ENVIRONMENTAL**

Temperature	Operation: -40 °C to +85 °C Storage: -54 °C to +125 °C
Humidity	0% to 90% Relative

**ANALOG INPUTS**

Inputs	8 non isolated 10-Bit ADC channels
Channel Inputs	0 to 5V

**DIGITAL INPUTS**

Inputs	10 non isolated digital channels
Channel Inputs	0V to 5V

**DIGITAL OUTPUTS**

Channels	2 channels not isolated can be used for internal signaling
Electrical standard	TTL

**SERIAL ASYNC**

Channels	One channel used as DTE (Data Terminal Equipment) device
Data Rates	Up to 125 Kbps
Electrical standard	RS 232
Operation	Full duplex
Communication Format	Data bits: 5,6,7,8 Stop bits: 1, 1.5, 2 Parity: odd, even, no parity

**UART TO USB**

Description	USB to asynchronous serial data transfer interface
Data Rates	300 baud to 3 Mbaud